Attachment 1: Framework for 2017 Sea Grant-NOAA Regional Integration Work Plan

Region: NOAA Great Lakes Region

Project Title: Green Infrastructure and Stormwater Management: A workshop to explore decision support tools to support community resiliency

Personnel:

Ohio Sea Grant:

- Lead Program Director: Dr. Chris Winslow
- Secondary Contact: Dr. Kristen Fussell

Regional Collaboration Team:

- Regional Team Lead/Co-lead: Deborah Lee
- Regional Coordinator: Jennifer Day

Project Description: A number of Sea Grant Programs across the country have been working within the realm of green infrastructure and stormwater management. Their work includes assisting communities with development of new or revised policies, and conducting related stakeholder engagement to address community resiliency for changing stormwater management needs. Programs have also implemented research to improve understanding of green infrastructure science and have created tools for assisting stakeholder implementation. Programs within the Great Lakes Network began collaborative efforts at a network meeting in 2015. A key outcome of that meeting was that GLSGN staff developed a Green Infrastructure-Stormwater Community of Practice (CoP). The CoP has had several group conversations, hosted a webinar, a session at a national conference in 2016, and had several informal in-person meetings. The Great Lakes Sea Grant Network participants met in 2017 (Great Lakes Sea Grant Network Meeting in Cleveland, Ohio; June 5-8) to share local efforts and identify next steps.

Initially, the CoP established the following objectives:

- SHARE successful and effective GI & stormwater education programs and training methods
- DISCUSS and DEVELOP new products or programs to meet our needs as Extension and Sea Grant professionals
- COLLABORATE on GI & stormwater education and training opportunities

This Research Collaboration/Integration effort, working in close conjunction with a recently funded National Sea Grant visioning project ("Community Response to Flooding"), will provide the resources to catalyze efforts needed to assess and support updates to green infrastructure and stormwater policies, codes, and ordinances. Additionally, this effort will help communities understand and use green infrastructure to minimize stormwater runoff and its potential impacts to the built and natural environment. The components and actions articulated in this proposal reflect the interests and needs of multiple programs expressed through the CoP network and discussed at the Great Lakes Sea Grant Network Conference in June 2017. Further, the National Sea Grant College Program is currently involved in a Network Visioning effort is designed to take a longer-term view of where the National Sea Grant program should be going in the area of community resilience to flooding using green infrastructure and natural assets.

This Regional Collaboration effort is designed to work with NOAA to put into action related initiatives that will have immediate impacts.

* In the context of this proposal we define green infrastructure to include local, distributed practices designed to detain and treat rainfall before it becomes runoff (e.g., rain gardens and wet swales) as well as natural assets (e.g., riparian areas and vegetated shorelines) that can absorb runoff that could otherwise create inundation risks.

What Regional Collaboration and Sea Grant* priorities will this support?

Sea Grant Priorities:

- Healthy Coastal Ecosystems (HCE) Focus Area**:**
    - GOAL #1: Great Lakes habitats, ecosystems, and the services they provide are protected, enhanced, and/or restored
        - ACTION #1: Develop and share scientific understanding, decision-support tools, technologies and approaches to protect and restore ecosystems
- Resilient Communities and Economies (RCE) Focus Area**:**
    - GOAL #1: Great Lakes coastal communities use their knowledge of changing conditions and risk to become resilient to extreme events, economic disruptions, and other threats to community well-being
        - ACTION #1: Use innovative tools to increase the public's awareness of changing conditions and the potential impacts their communities, economies and ecosystems may encounter
        - ACTION #2: Utilize comprehensive planning and adaptive management strategies to enhance community resilience to hazards, changing environmental conditions, and changing socioeconomic conditions
    - GOAL #2: Great Lakes water resources are sustained and protected to meet emerging needs of the communities, economies, and ecosystems that depend on them.
        - ACTION #2: Collaborate with stakeholders to develop and share best management practices (BMPs) to protect and manage water resources
- Environmental Literacy and Workforce Development (ELWD) Focus Area:
    - GOAL #1: An environmentally literate public that is informed by formal and informal education programming
        - ACTION #1: Enable the public to engage in community planning processes with respect to adaptive management to changing conditions by providing the best available information

NOAA Regional Collaboration Priorities:

- Address Regional Challenges by connecting people and resources
    - Gather information on place-based issues and impacts
    - Identify and fill data, communication, coordination, and resource gaps.
    - Develop and extend NOAA's interdisciplinary capacity to improve regionally tailored cross-line office activities.
- Exchange both national and regional insights that inform action
    - Enhance leadership understanding of regional issues and the interconnectedness of NOAA expertise
    - Search, gather, integrate and disseminate information
    - Provide guidance and support of NOAA-wide, cross-line regional programs
- Improve the understanding of and respect for NOAA's broad mission and regional capabilities
    - Foster interaction among NOAA and with partners by serving as effective liaisons
    - Elevate awareness and value of NOAA in the region
    - Build a more informed NOAA workforce

What do you plan to achieve/goals for this project?

Goal #1: Share and cross-train Sea Grant professionals on models, methods, and tools to understand and assess green infrastructure and stormwater policies, codes, and ordinances, and on effective green infrastructure extension and outreach to community leaders, business owners and others.

Goal #2: Help communities understand and use green infrastructure to minimize stormwater runoff and its potential impacts to the built and natural environment, and to enable communities to be more responsive and resilient to environmental and population changes over time.

What are your expected product(s) and results(s)?

Product #1:

- *Action:* Expand the Sea Grant Green Infrastructure/Stormwater Community of Practice
- *Format:* Virtual - including conference calls, webinars and Google group online
- *Description:* The GLSGN created the Green Infrastructure-Stormwater Community of Practice in 2016 with significant interest from Great Lakes and other national program interests. Currently it exists as a Google chat platform that has not been able to be implemented on a regular basis. To-date, members have expressed interest developing a project from which to grow the CoP and increase its impact. Through the upcoming "Community Response to Flooding" visioning effort (with two Great Lakes Sea Grant programs as co-leads), virtual gatherings will begin to "build the capacity of the participating programs on the inter-related topics around community flooding and stormwater" and develop content such as case studies, example materials, and lessons learned that will provide much of the basis for organizing product #2. This visioning effort is national though most Great Lakes

programs are participating. This regional collaboration effort will expand the membership within the Great Lakes and develop partnerships between state coastal management, NOAA, and Sea Grant programs. In concert with the visioning efforts, this collaboration effort will organize a series of conference calls, webinars, or other virtual gatherings for Great Lakes Sea Grant, Coastal Management, and NOAA staff interested and engaged with Green Infrastructure efforts. We will organize a schedule of communication to collaboratively work and plan program activities within the realm of green infrastructure and stormwater policies for community resiliency to accomplish products 2 and 3

Product #2

- *Action:* Provide Sea Grant staff professional training on stormwater and green infrastructure policy. Planning efforts for this training/workshop may broaden the scope beyond policy to include green infrastructure science, technologies, current trends
- *Format:* *In-person*
- *Description:* A three day training for Great Lakes Sea Grant staff, coastal management, and NOAA professionals and affiliates. The professional training will be led and facilitated by expert Sea Grant Extension professionals and regional content experts. It will provide an opportunity for Sea Grant Extension professionals to share outreach tools and discuss roles of various Sea Grant programs in green infrastructure and stormwater outreach. This will include: (1) the use of tours and on-the-water workshops, education and training approaches for local policy leaders, (2) successful engagement strategies, (3) green infrastructure and stormwater management practice assessment, and (4) audit tools. Coastal management will have an opportunity to share needs and considerations to meet state policies, and NOAA staff will provide background and information on the use of weather, climate, runoff tools and resources. An initial design of the program was discussed at the Great Lakes Sea Grant Network Conference but will be refined via discussions from all participating programs as indicated in “Product #1”

    - Day #1: Training on use of priority tools, methods, and resources identified in “Product #1”
    - Day #2: Training, continued; Begin collaborative creation of a workshop model(s) that multiple state programs can implement/replicate together or individually
    - Day #3: Continue creation of workshop model(s), and identify additional needs for research, data, or other resources
    - Post-Workshop: Refine and edit vision via virtual collaboration tools.
    - Costs will be covered through a combination of funds from this initiative and a small registration fee to cover food and refreshments.

Product #3

- *Action:* Implement the workshop model(s) in all Great Lakes Sea Grant states (IN/IL, MI, NY, OH, WI, MN, PA, and VT)
- *Format:* In-person. To be implemented by each program within their region; will include an evaluation component
- *Description:* Network programs will implement one of the workshop models within their program's region with communities

Project Rationale:

How does this strengthen the Sea Grant - Regional Collaboration relationship? Many of the complex challenges that drive the NOAA mission are place based and require interdisciplinary approaches and regionally tailored solutions. This Regional Collaboration proposal will address green infrastructure and stormwater challenges by engaging and connecting people and resources within the region in ways that are rich in regional insight and that inform action. Effort will utilize NOAA tools relating to water levels, storms and storm frequency, and runoff.

How does this benefit stakeholders in the region? Green Infrastructure and stormwater management efforts directly affect critical issues for all of our coastal areas, most notably by enhancing the safety of people and property in flood-prone areas. But these issues also include fresh water resources, water quality, harmful algal blooms, and hypoxia. Current efforts are not organized; many states are involved, but we don't always know who is doing what, or how another state's projects could be useful for our own. By developing a national vision for these efforts, the capacity to address all of these issues will be enhanced. We will better understand who has the tools, techniques, and/or experience to address local needs, research gaps will be identified that our programs can address and share with others, and we will have a more robust nationwide community of practice to facilitate dissemination of new ideas across the network. Such a network will also provide the opportunity to assess successes and challenges in green infrastructure and stormwater management practices across a broad geographic area, helping to identify and share the most effective practices for use in certain areas.

Project Approach:

What NOAA and Sea Grant programs and assets will be involved? Extension will be primary focus, however research needs will be assessed through the in-person workshop and online/virtual tools. A number of Education-focused tools, such as the Watershed Game (MNSG) and Tackling Barriers to Green Infrastructure Workbook (WISG) will be included in the tools and trainings. Additionally, recall that project outcomes and discussions will inform the current efforts to craft a visioning document for the National Sea Grant Program ("Community Response to Flooding").

How will the NOAA Regional Collaboration Team be involved?

We will engage as many members of NOAA's Great Lakes Regional Collaboration Team as possible, specifically:

- NOAA National Weather Service
- NOAA Great Lakes Environmental Research Laboratory

- NOAA National Ocean Service (including Ocean and Coastal Resource Management and Office for Coastal Management)
- NOAA Great Lakes Restoration Initiative
- Cooperative Institute for Great Lakes Research (CIGLR)
- NOAA Office of Response and Restoration, Emergency Response Division
- NOAA National Centers for Coastal Ocean Science
- NOAA National Marine Fisheries Service/Habitat

Additionally, we plan to engage each state's Great Lake Coastal Zone Management Program:

- New York Coastal Management Program, with the New York Department of State serving as the lead agency
- Ohio Coastal Management Program, with the Ohio Department of Natural Resources serving as the lead agency
- Illinois Coastal Management Program, under the direction of the Illinois Department of Natural Resources
- Indiana Coastal Management Program, led by the Indiana Department of Natural Resources
- Michigan Coastal Management Program, administered by the Department of Environmental Quality
- Wisconsin Coastal Management Program, administered by the Department of Administration, Bureau of Intergovernmental Relations.
- Minnesota's Lake Superior Coastal Program, consists of a network of agencies and programs led by the Department of Natural Resources.
- Pennsylvania Coastal Management Program, administered by the Department of Environmental Protection
- Vermont Watershed Management Division, within the Department of Environmental Conservation

Key Milestones:

- Finalize project plan (October 2017)
- Identify participants and partners (Q1 2018)
- Plan Workshop (Q2-Q3 2018)
- Hold Workshop (January 2018)
- implement one of the workshop models (Q1-Q2 2018**)**
- Produce Report (Q2 2018)

Proposed budget (changes possible as project plan is finalized)

A. **Salaries and Wages:** (~$7,500 / Match TBD)
   - Co-PI salaries: ~$4,500 ($2,250 for each of 2 Co-PIs)
   - Co-Extension leads: ~$3,000 ($1,000 for each of 3 Co-Extension leads)
   - Tasks will include project coordination and reporting

B. **Fringe Benefits:** (~$1,503 / Match TBD)

- Benefits rate will vary depending on institution; fringe rate used for this budget was 33.4%

C. **Permanent Equipment:** ($0 / Match $0)

D. **Expendable Supplies:** (~$965 / Match TBD)
   - Supplies for Regional Collaboration; to include but not limited to flipcharts, markers, name tags, agendas & handouts

E. **Travel:** ($4,500 / Match TBD)
   - Travel for Co-PIs and Co-Extension Leads; ~$750 per individual

F. **Other costs:** ($18,000 / Match TBD)
   - Participant support for travel to Regional Collaboration workshop

G. **Indirect Cost:** (~$17,533)
   - Indirect costs for the Regional Collaboration project

** Match is listed as TBD but may not be necessary as Ohio Sea Grant has already fully matched the $100,000 Coastal Resiliency “placeholder” inserted into the current Omnibus.